

Amendments To The Claims:

Claim 20 through claim 41 are canceled below.

1. **(Currently Amended):** A lift drive comprising:
a plastic spiral drive element having an axis of rotation;
a single plastic rack having a base and a plurality of teeth extending from said base, wherein each tooth has a thrust surface sized and shaped to be engaged by said spiral drive element, said base having a reinforcing element, and said rack having a longitudinal axis parallel to said axis of rotation;
a motor coupled to said spiral drive element for rotating said spiral drive element; and
a movable carriage having wheels, said motor being mounted onto said carriage[[:]],

wherein said rack is comprised of a plurality of sections, each of said sections comprising a plastic molded body having a base and a plurality of teeth extending from said base, each tooth including a thrust surface sized and shaped to have sliding contact with a thread from a worm gear, said body further including a reinforcing element, and wherein said reinforcing element for said section is a metal reinforcing element and provides dimensional stability to said plastic molded body under load, and wherein said section is molded with a void and said reinforcing element is sized and shaped to fit into said void, and

wherein upon said spiral drive element rotating, one of said spiral drive element and said rack moves relative to the other along said longitudinal axis in a lift direction or a lower direction.

2. **(Original):** A lift drive as claimed in claim 1 wherein said spiral drive element moves

and said rack is stationary.

3. **(Original):** A lift drive as claimed in claim 1 wherein said spiral drive element includes between one and twelve generally spiral drive threads, each of said drive threads engaging at least one of said rack teeth.

4. **(Previously Presented):** A lift drive as claimed in claim 3 wherein at least one of said spiral drive threads engages at least two teeth on said rack at once.

5. **(Cancelled)**

6. **(Previously Presented)** A lift drive as claimed in claim 2 wherein said carriage includes a plurality of wheels and said rack is fixed to a rail by said base and wherein said rail includes wheel guides to guide said wheels and thereby said carriage along said rail.

7. **(Original):** A lift device as claimed in claim 2 wherein each of said teeth includes a thrust surface sized and shaped to engage at least one of spiral drive threads of said spiral drive element.

8. **(Original):** A lift device as claimed in claim 1 wherein said rack includes teeth that are spaced apart by a distance “a” and the number of teeth passed per revolution of said spiral drive element is determined by the number of threads on said spiral drive element, wherein the speed of said movement along said longitudinal axis is proportional to the number of spiral drive threads as well as the spacing “a” of said teeth.

9. **(Currently Amended):** A lift device as claimed in claim 1 wherein said device further includes a gearbox to operatively couple said motor to said spiral drive element, whereby said spiral drive element is rotated at a speed suitable ~~from~~ **for** producing an acceptable linear speed for said drive element along said track.

10. **(Currently Amended)**: A lift device as claimed in claim 9 ~~wherein~~ constructed and arranged such that when said motor has a predetermined output speed, and said spiral threads of said spiral drive element have a preselected pitch, and said teeth have a predetermined spacing, ~~having regard to~~ said speed of rotation of said drive element and said tooth spacing to drive said carriage along said rack at a predetermined speed.

11. **(Previously Presented)**: A lift device as claimed in claim 3 wherein said lift drive has a predetermined load capacity, and sufficient number of spiral drive threads are provided to permit enough teeth to be simultaneously engaged to support said load capacity together with a reasonable factor of safety.

12. **(Original)**: A lift device as claimed in claim 11 wherein said factor of safety is at least 1.5.

13. **(Previously Presented)**: A lift device as claimed in claim 1 wherein said spiral drive element and said teeth are selected from materials which in combination have a low coefficient of friction.

14. **(Original)**: A lift device as claimed in claim 13 wherein said coefficient of friction is between 0.03 and 0.18.

15. **(Cancelled)**

16. **(Previously Presented)**: A lift device as claimed in claim 13 wherein said spiral drive thread is made from oil impregnated plastic.

17. **(Original)**: A lift device as claimed in claim 16 further including a gear box between said motor and said spiral drive element, said gear box providing a speed reduction of between about

8 to 1 and 60 to 1.

18. **(Previously Presented):** A lift device as claimed in claim 17 wherein said gear box and spiral drive element have a combined efficiency of between 35% to 88%.

19. **(Previously Presented):** A lift device as claimed in claim 18 wherein said spiral drive element and said rack have an efficiency of between 70% and 86%.

20. – 41. **(Cancelled):**

42. **(New)** A drive device for lifting loads comprising:

a moveable carriage having wheels;

a motor carried by said carriage, said motor having an output shaft;

a gearbox attached to said output shaft to reduce a speed of revolution transmitted by said motor, such gearbox being configured for maximum efficiency,

a plastic threaded spiral drive element attached to and driven by an output shaft of said gearbox; and

a single plastic fixed rack having teeth sized and shaped to be engaged by said threaded spiral drive element, said rack being reinforced,

wherein said fixed rack comprised of a plurality of sections, each of said sections comprising a plastic molded body having a base and a plurality of teeth extending from said base, each tooth including a thrust surface sized and shaped to have sliding contact with a thread from a worm gear, said body further including a reinforcing element, and

wherein said reinforcing element for said section is a metal reinforcing element and provides dimensional stability to said plastic molded body under load, and

wherein said section is molded with a void and said reinforcing element is sized and shaped to fit into said void, and

wherein upon said motor being activated said spiral drive element drives said carriage longitudinally along said rack.

43. (New) A drive device as claimed in claim 42 wherein said reinforcing element is separated from either end of said section by a plastic section, whereby said section can be axially pre-loaded.

44. (New) A drive device for lifting loads comprising:

- a moveable carriage having wheels;
- a motor carried by said carriage, said motor having an output shaft;
- a gearbox attached to said output shaft to reduce a speed of revolution transmitted by said motor, such gearbox being configured for maximum efficiency,
- a plastic threaded spiral drive element attached to and driven by an output shaft of said gearbox; and
- a single plastic fixed rack having teeth sized and shaped to be engaged by said threaded spiral drive element, said rack being reinforced,

wherein said fixed rack is comprised of a plurality of sections, each of said sections comprising a plastic molded body having a base and a plurality of teeth extending from said base, each tooth including a thrust surface sized and shaped to have sliding contact with a thread from a worm gear, said body further including a reinforcing element, and

wherein said base of each of said sections further includes shoulders for retaining said section in a track, and

wherein upon said motor being activated said spiral drive element drives said carriage longitudinally along said rack.